SEQUENCE LISTING

45

	<110> CHUGAI SEIYAKU KABUSIKI KAISHA	
5	<120> Vascularization Inhibitors	
	<130> CGS-I 98-06 PCT	
	<140> PCT/JP99/01448	
10	<141> 1999-03-23	
	<150> JP10/95448 <151> 1998-03-24	
15	<160> 12	
	<210> 1 <211> 352 <212> PRT	
20	<213> Mus	-
	<pre><400> 1 Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu 5 10</pre>	15
25	Met Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg 20 25	30
	Glu Glu Asn Ala Asn Phe Asn Lys Ile Phe Leu Pro Thr Ile Tyr 35 40	45
30	Ser Ile Ile Phe Leu Thr Gly Ile Val Gly Asn Gly Leu Val Ile 50 55	60
	Leu Val Met Gly Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys 65 70	75
	Tyr Arg Leu His Leu Ser Val Ala Asp Leu Leu Phe Val Ile Thr 80 85	90
35	Leu Pro Phe Trp Ala Val Asp Ala Val Ala Asn Trp Tyr Phe Gly 95 100	105
	Asn Phe Leu Cys Lys Ala Val His Val Ile Tyr Thr Val Asn Leu	120
40	Tyr Ser Ser Val Leu Ile Leu Ala Phe Ile Ser Leu Asp Arg Tyr	135
~~	Leu Ala Ile Val His Ala Thr Asn Ser Gln Arg Pro Arg Lys Leu 140 145	150
	Leu Ala Glu Lys Val Val Tyr Val Gly Val Trp Ile Pro Ala Leu 155 160	165

Leu Leu Thr Ile Pro Asp Phe Ile Phe Ala Asn Val Ser Glu Ala

					1	.70					175	5		¥			180
	Asp	Asp	Arg	Tyr		Cys .85	Asp	Arg	Phe	Tyr	Pro 190		Asp	Leu	Trp		195
5	Val	Val	Val	Phe		Phe	Gln	His	Ile	Met	Val 205		Leu	Ile	Leu		210
U	Pro	Gly	Ile	Val	Ile	Leu	Ser	Cys	Tyr	Cys	Ile	Ile	Ile	Ser	Lys		
	Leu	Ser	His	Ser		215 Gly	His	Gln	Lys	Arg	220 Lys		Leu	Lys	Thr		225
10	Thr	Val	Ile	Leu		30 Leu	Ala	Phe	Phe	Ala	235 Cys		Leu	Pro	Tyr		240
					2	45					250 Leu)					255
					2	60					265	5					270
15	Lys	Gln	Gly	Cys		Phe 75	Glu	Asn	Thr	Val	His 280		Trp	He	Ser		285
	Ile	Thr	Glu	Ala		Ala 90	Phe	Phe	His	Cys	Cys 295		Asn	Pro	Ile		300
	Leu	Tyr	Ala	Phe		Gly 05	Ala	Lys	Phe	Lys	Thr 310		Ala	Gln	His		315
20	Ala	Leu	Thr	Ser	Val	Ser	Arg	Gly	Ser	Ser	Leu	Lys	Ile	Leu	Ser		
	Lys	Gly	Lys	Arg		20 Gly	His	Ser	Ser	Val	325 Ser		Glu	Ser	Glu	,	330
	Ser	Ser	Ser	Phe		35 Ser	Ser				340						345
25					3	50											
)> 2															
		l> 15 2> DN															
30	<213	3> Mu	IS														
•	<220)> L> CD	ne.														
		2> (1		(105	9)												
35	<400)> 2															
											aac				_		
											gaa ctg						
40		-		_							aat						
	ctg	gtc	atg	ggt	tac	cag	aag	aaa	ctg	aga	agc	atg	acg	gac	aag	225	
			-		_			_	-		ctc		_		_		
									-	_	aac						
45									-		tac agt		_				
10	vac	$u_{\xi}c$	ա Б	900		auc	U U 5	800		all	ας ι	UUE	sac	UEU	vac	TUU	

```
ctg gcc atc gtc cac gcc acc aac agt cag agg cca agg aag ctg 450
         ttg gct gaa aag gtg gtc tat gtt ggc gtc tgg atc cct gcc ctc 495
         ctg ctg act att ccc gac ttc atc ttt gcc aac gtc agt gag gca 540
         gat gac aga tat atc tgt gac cgc ttc tac ccc aat gac ttg tgg 585
         gtg gtt gtg ttc cag ttt cag cac atc atg gtt ggc ctt atc ctg 630
 5
         cct ggt att gtc atc ctg tcc tgc tat tgc att atc atc tcc aag 675
         ctg tca cac tcc aag ggc cac cag aag cgc aag gcc ctc aag acc 720
         aca gtc atc ctc atc ctg gct ttc ttc gcc tgt tgg ctg cct tac 765
         tac att ggg atc agc atc gac tcc ttc atc ctc ctg gaa atc atc 810
10
         aag caa ggg tgt gag ttt gag aac act gtg cac aag tgg att tcc 855
         atc acc gag gcc cta gct ttc ttc cac tgt tgt ctg aac ccc atc 900
         ctc tat gct ttc ctt gga gcc aaa ttt aaa acc tct gcc cag cac 945
         gea etc ace tet gtg age aga ggg tec age etc aag ate etc tec 990
         aaa gga aag cga ggt gga cat tca tct gtt tcc act gag tct gag 1035
         tet tea agt ttt cae tee age taa cacagatgta aaagactttt ttttat 1085
15
         acgataaata acttttttt aagttacaca tttttcagat ataaaagact gaccaatatt 1145
         gtacagtttt tattgcttgt tggatttttg tcttgtgttt ctttagtttt tgtgaagttt 1205
         aattgactta tttatataaa ttttttttgt ttcatattga tgtgtgtcta ggcaggacct 1265
         gtggccaagt tettagttge tgtatgtete gtggtaggae tgtagaaaag ggaactgaae 1325
         attccagage gtgtagttaa tcacgtaaag ctagaaatga tccccagctg tttatgcata 1385
20
         gataatetet ceatteeegt ggaaegtttt teetgttett aagaegtgat tttgetgtag 1445
         aagatggcac ttataaccaa agcccaaagt ggtatagaaa tgctggtttt tcagttttca 1505
         ggagtgggtt gatttcagca cctacagtgt acagtcttgt attaagttgt taataaaagt 1565
         acatgttaaa cttaaaaaaa aaa
                                                                                  1588
25
         <210> 3
         <211> 359
         <212> PRT
         <213> Mus
30
         <400> 3
        Met Glu Pro Ile Ser Val Ser Ile Tyr Thr Ser Asp Asn Tyr Ser
                                                                           15
        Glu Glu Val Gly Ser Gly Asp Tyr Asp Ser Asn Lys Glu Pro Cys
                                                                           30
35
                                                   25
        Phe Arg Asp Glu Asn Val His Phe Asn Arg Ile Phe Leu Pro Thr
                                                                           45
         Ile Tyr Phe Ile Ile Phe Leu Thr Gly Ile Val Gly Asn Gly Leu
                                                                           60
                                                   55
                            50
        Val Ile Leu Val Met Gly Tyr Gln Lys Lys Leu Arg Ser Met Thr
40
                                                                           75
        Asp Lys Tyr Arg Leu His Leu Ser Val Ala Asp Leu Leu Phe Val
                            80
                                                                           90
        Ile Thr Leu Pro Phe Trp Ala Val Asp Ala Met al.a Asp Trp Tyr
                            95
                                                  100
                                                                         105
```

45

	Phe	Gly	Lys	Phe		Cys .10	Lys	Ala	Val	His	11e . 115	He	Tyr	Thr	Val	120
,	Asn	Leu	Tyr	Ser	Ser	Val	Leu	Ile	Leu	Ala	Phe 1	Ile	Ser	Leu	Asp	
5	Arg	Tvr	Leu	Ala		.25 Val	His	Ala	Thr	Asn	130 Ser (iln	Arg	Pro	Arg	135
Ū	0	-0-				40					145		0			150
	Lys	Leu	Leu	Ala		Lys 55	Ala	Val	Tyr	Val	Gly V 160	/al	Trp	Ile	Pro	165
	Ala	Leu	Leu	Leu			Pro	Asp	Phe	Ile	Phe A	lla	Asp	Val	Ser	
10	Gln	Glv	Aen	בוו		70 Gln	Glv	Aen	Asn	Δrσ	175 Tyr 1	ء []	Cve	∆ en	Δησ	180
	0111	ury	пор			85	uij	nop	nop :	m 5	190	. 10	0,3	пор	m 8	195
	Leu	Tyr	Pro	Asp			Trp	Met	Val	Val	Phe C	lln	Phe	Gln	His	010
15	Ile	Met.	Val	Glv		00 Ile	Leu	Pro	Glv	Ile	205 Val I	le	Leu	Ser	Cvs	210
				w-0		15					220					225
	Tyr	Cys	Ile	Ile		Ser 30	Lys	Leu	Ser	His	Ser I 235	ys	Gly	His	Gln	240
	Lys	Arg	Lys	Ala			Thr	Thr	Val	Ile	Leu I	le	Leu	Ala	Phe	
20						4 5	_	_			250	_				255
	Phe	Ala	Cys	Trp		Pro 60	Tyr	Tyr	Val	Gly	Ile S 265	er	He	Asp	Ser	270
	Phe	Ile	Leu	Leu			Ile	Lys	Gln	Gly	Cys A	sp	Phe	Glu	Ser	210
0.5	T 1	77 1		T		75	a	T1.	m1	01	280		41.	DI.	D1	285
25	116	vai	HIS	Lys		11e 90	Ser	116	Inr	GIU	Ala L 295	eu	Ala	Pne	Pne	300
	His	Cys	Cys	Leu			Ile	Leu	Tyr	Ala	Phe L	eu	Gly	Ala	Lys	
·	Dho	Ι	Con	Con		05 Cln	u; a	41a	Lou	Aan	310	ſo.ŧ	Con	Ana	Č1	315
30	rne	гуѕ	Set.	ser.		20	піѕ	Ala	Leu	ASII	Ser M 325	let	ser.	Arg	GIY	330
	Ser	Ser	Leu	Lys			Ser	Lys	Gly	Lys	Arg G	ly	Gly	His	Ser	0.45
	Ser	Va1	Ser	Thr		35 Ser	Glu	Ser	Ser	Ser	340 Phe H	lis	Ser	Ser		345
	501		501			50		202	-		355			501		
35	4017	n. 4														
)> 4 l> 17	758													
	<212	2> DN	IA													
40	<213	3> Mu	IS													
40	<220)>														
	<221	l> CE														
		2> (1 >>)	(108	(0)											
45	<223)/														

4/9

```
<400> 4
        atg gaa ccg atc agt gtg agt ata tac act tct gat aac tac tct 45
        gaa gaa gtg ggg tot gga gac tat gac toc aac aag gaa coc tgc 90
        tte egg gat gaa aac gte cat tte aat agg ate tte etg eec acc 135
 5
        ate tac tte ate ate tte ttg act gge ata gte gge aat gga ttg 180
        gtg atc ctg gtc atg ggt tac cag aag aag cta agg agc atg acg 225
        gac aag tac egg etg cac etg tea gtg get gac etc etc ttt gte 270
        ate aca etc eec tte tgg gea gtt gat gee atg get gae tgg tae 315
        ttt ggg aaa ttt ttg tgt aag gct gtc cat atc atc tac act gtc 360
10
        aac etc tac age age gtt etc atc etg gee tte atc age etg gae 405
        cgg tac ctc gcc att gtc cac gcc acc aac agt caa agg cca agg 450
        aaa ctg ctg gct gaa aag gca gtc tat gtg ggc gtc tgg atc cca 495
        gee etc etc etg act ata eet gae tte ate ttt gee gae gte age 540
        cag ggg gac atc agt cag ggg gat gac agg tac atc tgt gac cgc 585
15
        ctt tac ccc gat agc ctg tgg atg gtg ttt caa ttc cag cat 630
        ata atg gtg ggt ctc atc ctg ccc ggc atc gtc atc ctc tcc tgt 675
        tac tgc atc atc tct aag ctg tca cac tcc aag ggc cac cag 720
        aag ege aag gee ete aag aeg aca gte ate ete ate eta get tte 765
        ttt gcc tgc tgg ctg cca tat tat gtg ggg atc agc atc gac tcc 810
20
        ttc atc ctt ttg gga gtc atc aag caa gga tgt gac ttc gag agc 855
        att gtg cac aag tgg atc tec atc aca gag gee etc gee tte tte 900
        cac tgt tgc ctg aac ccc atc ctc tat gcc ttc ctc ggg gcc aag 945
        ttc aaa agc tct gcc cag cat gca ctc aac tcc atg agc aga ggc 990
        tee age etc aag ate ett tee aaa gga aag egg ggt gga eac tet 1035
25
        tee gte tee acg gag tea gaa tee tee agt ttt cae tee age taa 1080
        cccttatgca aagacttata taatatatat atatatatga taaagaactt ttttatgtta 1140
        actgttggga gtttatgttc ctctagtttt tgtgaggttt gacttaattt atataaatat 1260
        tgttttttgt ttgtttcatg tgaatgagcg tctaggcagg acctgtggcc aagttcttag 1320
30
        tagetgttta tetgtgtgta ggaetgtaga aetgtagagg aagaaaetga aeatteeaga 1380
        atgtgtggta aattgaataa agctagccgt gatcctcagc tgttgctgca taatctcttc 1440
        attecgagga geacceacc eccaececca ecceaecec attettaaat tgtttggtta 1500
        aagatggcac ttaaaaccaa agcctgaaat ggtggtagaa atgctggggt tttttttgtt 1620
35
        tgtttgtttt ttcagttttc aagagtagat tgacttcagt ccctacaaat gtacagtctt 1680
       aaaaaaaaa aaaaaaaa
                                                                           1758
       <210> 5
40
       <211> 89
       <212> PRT
       <213> Artificial Sequence
       <223> Ligand peptide
```

5/9

45

```
<400> 5
         Met Asn Ala Lys Val Val Val Leu Val Leu Val Leu Thr Ala
                                                                        15
         Leu Cys Leu Ser Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys
                                                                        30
 5
        Pro Cys Arg Phe Phe Glu Ser His Val Ala Arg Ala Asn Val Lys
                                                                        45
        His Leu Lys Ile Leu Asn Thr Pro Asn Cys Ala Leu Gln Ile Val
                                                  55
                           50
                                                                        60
10
        Ala Arg Leu Lys Asn Asn Asn Arg Gln Val Cys Ile Asp Pro Lys
                           65
                                                                        75
        Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn Lys
15
        <210> 6
        <211> 2244
        <212> DNA
        <213> Mus
20
        <220>
        <221> CDS
        <222> (471)...(743)
        <400> 6
25
        gcacgggaca ggccgggcca cacccaccgg ggcgagctcg gagggcggcg ctctgggcgg 60
        agggcccggc ggctcggccc agggcgcgtt acctcgtcgc cggggccgga gagggcgggc 120
        ggaggcacgg ggcctggagg cgccaggcgg aggatgcggg cgacacggtg gcggcggcga 180
        ggatctgtcg aggaaaaatc ttgcggccgg cgattccccg ccttttaagc gcagcctgca 300
30
        ctecececae eccaegeagg ggegggeett ecceaaegeg ggegeeeaet ggeegeegeg 360
        cgccgctccc ctccagctcg cctgcgcctc tcactctccg tcagccgcat tgcccgctcg 420
        gegteeggee eeegaceege getegteege eegeeegee geeegeege gee 473
        atg aac gcc aag gtc gtg gtc gtg ctg gtc ctc gtg ctg acc gcg 518
        ctc tgc ctc agc gac ggg aag ccc gtc agc ctg agc tac aga tgc 563
35
        cca tgc cga ttc ttc gaa agc cat gtt gcc aga gcc aac gtc aag 608
        cat ctc aaa att ctc aac act cca aac tgt gcc ctt cag att gta 653
        gcc cgg ctg aag aac aac aac aga caa gtg tgc att gac ccg aag 698
        cta aag tgg att cag gag tac ctg gag aaa gct tta aac aag taa 743
        gcacaacage caaaaaggac tttccgctag acccactcga ggaaaactaa aaccttgtga 803
40
        gagatgaaag ggcaaagacg tgggggaggg ggccttaacc atgaggacca ggtgtgtgtg 863
        tggggtgggc acattgatct gggatcgggc ctgaggtttg ccagcattta gaccetgcat 923
        ttatagcata eggtatgata ttgeagetta tatteateea tgeeetgtae etgtgeaegt 983
        tggaattttt attactgggg tttttctaag aaagaaattg tattatcaac agcattttca 1043
        agcagttagt teetteatga teateacaat cateateatt eteattetea ttttttaaat 1103
45
        caacgagtac ttcaagatct gaatttggct tgtttggagc atctcctctg ctcccctggg 1163
```

```
gagtetggge acagteaggt ggtggettaa cagggagetg gaaaaagtgt cetttettea 1223
         gacactgagg ctcccgcagc agcgcccctc ccaagaggaa ggcctctgtg gcactcagat 1283
         accgactggg gctgggcgcc gccactgcct tcacctcctc tttcaacctc agtgattggc 1343
         tetgtggget ceatgtagaa gecaetatta etgggaetgt geteagagae eeeteteeca 1403
 5
         getatteeta eteteteee gaeteegaga geatgeatta atettgette tgetteteat 1463
         ttetgtagee tgateagege egeaceagee gggaagaggg tgattgetgg ggetegtgee 1523
         etgeateeet eteeteecag ggeetgeeee acageteggg ecetetgtga gateegtett 1583
         tggcctcctc cagaatggag ctggccctct cctggggatg tgtaatggtc cccctgctta 1643
         ecegeaaaag acaagtettt acagaateaa atgeaatttt aaatetgaga getegetttg 1703
         agtgactggg ttttgtgatt gcctctgaag cctatgtatg ccatggaggc actaacaaac 1763
10
         tetgaggttt eegaaateag aagegaaaaa ateagtgaat aaaceateat ettgeeacta 1823
         cccctcctg aagccacage agggtttcag gttccaatca gaactgttgg caaggtgaca 1883
         tttccatgca taaatgcgat ccacagaagg tcctggtggt atttgtaact ttttgcaagg 1943
         cattttttta tatatatttt tgtgcacatt tttttttacg tttctttaga aaacaaatgt 2003
15
         atttcaaaat atatttatag tcgaacaatt catatatttg aagtggagcc atatgaatgt 2063
         cagtagttta tactteteta ttateteaaa etaetggeaa tttgtaaaga aatatatatg 2123
         atatataaat gtgattgcag cttttcaatg ttagccacag tgtatttttt cacttgtact 2183
         aaaattgtat caaatgtgac attatatgca ctagcaataa aatgctaatt gtttcatggt 2243
                                                                           2244
20
         <210> 7
         <211> 89
         <212> PRT
         <213> Artificial Sequence
25
         <223> Ligand peptide
         <400> 7
        Met Asp Ala Lys Val Val Ala Val Leu Ala Leu Val Leu Ala Ala
30
                                                                           15
        Leu Cys Ile Ser Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys
                                                                           30
        Pro Cys Arg Phe Phe Glu Ser His Ile Ala Arg Ala Asn Val Lys
                                                                           45
35
        His Leu Lys Ile Leu Asn Thr Pro Asn Cys Ala Leu Gln Ile Val
                                                                           60
        Ala Arg Leu Lys Asn Asn Asn Arg Gln Val Cys Ile Asp Pro Lys
                                                                          75
        Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn Lys
40
                            80
                                                 - 85
        <210> 8
        <211> 1781
        <212> DNA
45
        <213> Mua
```

```
<220>
         <221> CDS
         <222> (82)...(351)
 5
         <400> 8
         gaccacttte ceteteggte caceteggtg teetettget gteeagetet geagecteeg 60
                                                                           81
         gegegeeete eegeeeaege e
         atg gac gcc aag gtc gtc gcc gtg ctg gcc ctg gtg ctg gcc gcg 126
10
         ctc tgc atc agt gac ggt aaa cca gtc agc ctg agc tac cga tgc 171
         ccc tgc cgg ttc ttc gag agc cac atc gcc aga gcc aac gtc aag 216
         cat ctg aaa atc ctc aac act cca aac tgt gcc ctt cag att gtt 261
         gca cgg ctg aag aac aac aac aga caa gtg tgc att gac ccg aaa 306
         tta aag tgg atc caa gag tac ctg gag aaa gct tta aac aag taa 351
         gcacaacagc ccaaaggact ttccagtaga cccccgagga aggctgacat ccgtgggaga 411
15
         tgcaagggca gtggtgggga ggagggcctg aaccctggcc aggatggccg gcgggacagc 471
         actgactggg gtcatgctaa ggtttgccag cataaagaca ctccgccata gcatatggta 531
         cgatattgca gettatatte atecetgeee tegeeegtge acaatggage ttttataaet 591
         ggggtttttc taaggaattg tattacccta accagttagc ttcatcccca ttctcctcat 651
         cctcatcttc attttaaaaa gcagtgatta cttcaagggc tgtattcagt ttgctttgga 711
20
         gcttctcttt gccctggggc ctctgggcac agttatagac ggtggctttg cagggagccc 771
         tagagagaaa cettecacca gagcagagte egaggaacge tgeagggett gteetgeagg 831
         gggcgctcct cgacagatgc cttgtcctga gtcaacacaa gatccggcag agggaggctc 891
         ctttatccag ttcagtgcca gggtcgggaa gcttccttta gaagtgatcc ctgaagctgt 951
25
         geteagagae cettteetag cegtteetge tetetgettg cetecaaacg catgetteat 1011
         ctgacttccg cttctcacct ctgtagcctg acggaccaat gctgcaatgg aagggaggag 1071
         agtgatgtgg ggtgccccct ccctctcttc cctttgcttt cctctcactt gggccctttg 1131
         tgagattttt ctttggcctc ctgtagaatg gagccagacc atcctggata atgtgagaac 1191
         atgcctagat ttacccacaa aacacaagtc tgagaattaa tcataaacgg aagtttaaat 1251
30
         gaggatttgg accttggtaa ttgtccctga gtcctatata tttcaacagt ggctctatgg 1311
        gctctgatcg aatatcagtg atgaaaataa taataataat aataataacg aataagccag 1371
        aatettgeea tgaageeaca gtggggatte tgggtteeaa teagaaatgg agacaagata 1431
         aaacttgcat acattcttat gatcacagac ggccctggtg gtttttggta actatttaca 1491
         aggeattttt ttacatatat ttttgtgeac tttttatgtt tetttggaag acaaatgtat 1551
35
         ttcagaatat atttgtagtc aattcatata tttgaagtgg agccatagta atgccagtag 1611
         atatetetat gatettgage taetggeaac ttgtaaagaa atatatatga catataaatg 1671
         tattgtagct ttccggtgtc agccacggtg tatttttcca cttggaatga aattgtatca 1731
                                                                             1781
         actgtgacat tatatgcact agcaataaaa tgctaattgt ttcatgctgt
         <210> 9
40
        <211> 4
         <212> PRT
         <213> Artificial Sequence
45
         <220>
```

```
<223> added peptide
         <400> 9
         Arg Phe Lys Met
 5
         <210>10
         <211> 4
         <212> PRT
         <213> Artificial Sequence
10
         <220>
         <223> added peptide
         <400> 10
         Arg Leu Lys Met
15
         <210> 11
         <211> 27
         <212> DNA
20
         <213> Artificial Sequence
         <220>
         <223> primer
25
         <400> 11
         tageggeege gttgeeatgg aaeegat 27
         <210> 12
         <211> 27
         <212> DNA
30
         <213> Artificial Sequence
         <220>
         <223> primer
35
         <400> 12
        gcgtcgactt tgcataaggg ttagctg 27
```